

REMARKS

Applicant thanks the Examiner for the thorough consideration given the present application. Claims 1-4, 6-11, 14-21, 23 and 24 are currently being prosecuted. The Examiner is respectfully requested to reconsider his rejections in view of the amendments and remarks as set forth below.

Information Disclosure Statement

The Examiner is respectfully requested to acknowledge the Information Disclosure Statement filed on October 20, 2003. In initialed copy of the PTO Form 1449 should be sent to the undersigned at the earliest convenience of the Examiner.

Office Action Summary

It is noted that line 4a of the Office Action Summary indicates that claims 3, 12, 13 and 22 have been withdrawn from consideration. It is first noted that the correct claim numbers are 5, 12, 13 and 22. However, it is noted that these claims are not withdrawn from consideration, but rather cancelled. The present response is based on this understanding.

Rejection Under 35 USC §102

Claims 1-4, 6-11 and 14-21, 23 and 24 stand rejected under 35 USC §102 stand anticipated by Shinji et al (U.S. Patent 6,259,854). This rejection is respectfully traversed.

The Examiner points out the Shinji et al shows an auxiliary light source device, including a light source 1, a reflector 4 and a light directing member 3 for directing incident light from the light source toward the reflector. The Examiner refers to column 7, lines 5 and 6 to point out that the slope angle is 0 or 2°. The Examiner also states that when light is reflected along an orthogonal

direction L2/L3 to the liquid crystal display device, it is uniform and refers to column 1, lines 27 and 28 to show this. Applicant disagrees that the present claims are anticipated by this reference.

The present invention relates to a front-light unit for a reflective LCD device which is different than the back light unit for a transmissive LCD device found in Shinji et al. In a reflective LCD device, the front light unit is disclosed over the LCD panel and the LCD panel has a reflector at the bottom. In a transmissive LCD device, a back light unit is disclosed under the LCD device and the LCD device does not include a reflector. The back light unit has a reflector at its bottom to utilize light effectively.

Accordingly, in the present invention, the light of the light directing member is directed downwards while the light in the prior art is directed upwards. Thus, the light is directed in different directions. As seen in Fig. 4-11 of the prior art, the increase of an angle causes increase in upwardly admitted light (L2+L3) and does not show that the amount of downwardly emitted light has a maximum value when the angle is 0. Thus, the present invention is different from that of the Shinji et al reference.

To emphasize these differences, Applicant has amended claim 1 to point out that the light is directed toward the reflector outwardly along the orthogonal direction. This limitation is not seen in the reference. Furthermore, by defining this relationship, the other limitation of the uniform light reflection is also strengthened since the reference clearly states in column 7, lines 5-11 that when the angle is 0 or 2°, the scattering reflection efficiency is bad. Thus, Applicant submits that the limitation of the light reflected along an orthogonal direction being uniform is not met at these angles. Even though the statement in the Abstract and at column 1 indicate that the intent is to have uniform illumination, the statement in column 7 clearly indicates that in the prior art device a uniform illumination cannot be achieved. Since the reference clearly teaches away from a uniform

illumination at this angle, Applicant submits that the claim is neither anticipated by nor obvious over the Shinji et al reference.

Claim 10 is an independent claim which describes the reflective liquid crystal display device. This claim specifically describes the panel as being between the light source and the reflector which is different from the prior art where the light source is between the panel and the reflector. Accordingly, Applicant submits that this claim is not anticipated thereby. Furthermore, this claim further describes the 90° angle and the uniformity of the reflected light as also allowable for the reasons cited above in regard to claim 1.

Claim 11 and Claim 21 have also been amended in a fashion similar to claim 1 to describe the light reflected outwardly along an orthogonal direction. These claims also include the 90° angle and the uniformity of the light reflection. Accordingly, Applicant submits that these claims are allowable for the same reasons recited above in regard to claim 1.

Claims 2-4, 6-9, 14-20, 23 and 24 depend from these allowable independent claims and as such are also considered to be allowable. In addition, these claims recite other features to make these claims additionally allowable.

Conclusion

In view of the above remarks, it is believed that the claims clearly distinguish over the patent relied on by the Examiner. In view of this, reconsideration of the rejection and allowance of all the claims are respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert F. Gnuse (Reg. No. 27,295) at the telephone

number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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